

Please amend the application as follows:

In the Claims

Please amend Claims 107, 108, 112, 120, 150, 151, 155 and 161.

107. (Twice Amended) A method for monitoring damage at a fastener comprising:
mounting an eddy current sensor array to a test substrate under the head of a
fastener; and

sensing response of the test substrate to a magnetic field imposed by the
eddy-current sensor.

108. (Twice Amended) A method of monitoring damage at a fastener comprising:
mounting an eddy-current sensor array to a structure near a fastener, the sensor
being mounted between layers of the structure attached by the fastener; and
sensing response of the test substrate to a magnetic field imposed by the
eddy-current sensor.

112. (Twice Amended) A method for monitoring damage at a fastener comprising:
mounting at least two eddy-current sensor arrays on a test substrate around
respective fasteners;

connecting drive and sense conductors of the eddy-current sensors with a single
cable to a data acquisition system; and
sensing response of the test substrate to a magnetic field imposed by the
eddy-current sensors.

120. (Twice Amended) A method for monitoring damage at a fastener comprising:
mounting an eddy-current sensor array with a cylindrical support material shaped
in the form of a washer;
mounting the cylindrical support to a test substrate under a fastener head; and
sensing response of the test substrate to a magnetic field imposed by the
eddy-current sensor.

4
150. (Amended) A method as claimed in Claim 108 where the eddy current sensor has at least two drive conductors and the current changes direction in at least one conductor.

5
151. (Amended) A method as claimed in Claim 108 further comprising calibrating each sense element by adjusting the response to an appropriate level.

6
155. (Amended) A method as claimed in Claim 108, where the eddy current sensor has a periodic magnetic field produced by linear segments of the drive winding.

7
161. (Amended) A method as claimed in Claim 112 where the drive conductors of at least two sensors are connected in series.

Amendments to the claims are indicated in the attached "Marked Up Version of Amendments" (pages i - ii).

Please add new Claims 163-186.

1
163. (New) A method as claimed in Claim 107 where the sensor further comprises a drive having at least two conductors where the current changes direction in at least one conductor.

1
164. (New) A method as claimed in Claim 107 where at least one sensing element is placed in an area likely to see damage and at least one sensing element is placed in an area unlikely to see damage.

1
165. (New) A method as claimed in Claim 107 where the sense elements are located at different radial distances from the fastener center.

166. (New) A method as claimed in Claim 107 where the sense elements are located at different circumferential positions around the fastener.
167. (New) A method as claimed in Claim 108 where at least one sensing element is placed in an area likely to see damage and at least one sensing element is placed in an area unlikely to see damage.
168. (New) A method as claimed in Claim 108 where the sense elements are located at different radial distances from the fastener center.
169. (New) A method as claimed in Claim 108 where the sense elements are located at different circumferential positions around the fastener.
170. (New) A method as claimed in Claim 109 where at least one sensing elements is placed in an area likely to see damage and at least one sensing element is placed in an area unlikely to see damage.
171. (New) A method as claimed in Claim 109 where the sense elements are located at different radial distances from the fastener center.
172. (New) A method as claimed in Claim 109 where the sense elements are located at different circumferential positions around the fastener.
173. (New) A method as claimed in Claim 112 where at least one sensing element is placed in an area likely to see damage and at least one sensing element is placed in an area unlikely to see damage.
174. (New) A method as claimed in Claim 112 where the sense elements are located at different radial distances from the fastener center.

175. (New) A method as claimed in Claim 112 where the sense elements are located at different circumferential positions around the fastener.
176. (New) A method as claimed in Claim 120 where at least one sensing element is placed in an area likely to see damage and at least one sensing element is placed in an area unlikely to see damage.
177. (New) A method as claimed in Claim 120 where the sense elements are located at different radial distances from the fastener center.
178. (New) A method as claimed in Claim 120 where the sense elements are located at different circumferential positions around the fastener.
179. (New) A method for monitoring damage at a fastener comprising:
mounting at least two eddy-current sensor arrays on a test substrate around fasteners;
connecting drive windings of the eddy-current sensor arrays in series; and
sensing a response of the test substrate to a magnetic field imposed by the eddy-current sensor arrays.
180. (New) A method as claimed in Claim 179 wherein each sensor has one or more sensing elements.
181. (New) A method as claimed in Claim 180 where the response from all of the sensing elements are monitored in parallel at essentially the same time.
182. (New) A method as claimed in Claim 179 where the sensors are used to monitor material properties at different locations to detect response changes.